We claim:

1.    A processor comprising:

    a plurality of functional units including a first functional unit and a second functional unit, the first functional unit to receive instructions, to determine whether ones of the instructions are associated with a virus, and to transmit the ones of the instructions not associated with the virus to the second functional unit.

2.    The processor of claim 1, wherein the first functional unit is a virus detection unit, and wherein the second functional unit is a fetch and decode unit.

3.    The processor of claim 1, wherein the first functional unit includes,

    a virus information unit to store virus information; and

a virus detection engine to compare each of the instructions to the virus information.

4.    The processor of claim 3, wherein the virus detection unit includes an authentication unit to authenticate a source of the virus information.

5.    The processor of claim 1, wherein the first functional unit includes a virus information unit, the virus information unit to store a state machine that is to determine whether ones of the instructions are associated with a virus.

6.    The processor of claim 1, wherein the first functional unit is a virus detection unit and wherein the second functional unit is a dispatch and execution unit.

7.    A apparatus comprising:

    an instruction cache to store instructions;

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| 3 | a virus detection unit to receive the instructions from the instruction cache, |
| 4 | the virus detection unit to determine whether ones of the instructions |
| 5 | are associated with a virus; and |
| 6 | a dispatch and execution unit to receive from the virus detection unit the ones of the |
| 7 | instructions that are not associated with the virus. |

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| 1 | 8. The apparatus of claim 7, wherein the virus detection unit includes a virus |
| 2 | information unit to store virus signatures, the virus detection unit to compare each of |
| 3 | the instructions to the virus signatures. |

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| 1 | 9. The apparatus of claim 8, wherein the virus detection unit includes an |
| 2 | authentication unit to authenticate a source of the virus signatures. |

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| 1 | 10. The apparatus of claim 7, wherein the virus detection unit includes a virus |
| 2 | information unit to store state information, the virus detection unit to input each of |
| 3 | the instructions into a state machine. |

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| 1 | 11. A method comprising: |
| 2 | receiving an instruction in a first functional unit of a processor pipeline; |
| 3 | determining whether the instruction is associated with a virus; and |
| 4 | after determining the instruction is not associated with a virus, transmitting the |
| 5 | instruction to a second functional unit of the processor pipeline for further |
| 6 | processing. |

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| 1 | 12. The method of claim 11, wherein the determining whether the instruction is |
| 2 | associated with a virus includes, comparing the instruction to virus signatures stored |
| 3 | in the first functional unit. |

1    13.    The method of claim 11, wherein the determining whether the instruction is

2    associated with a virus includes inputting the instruction into a state machine stored

3    in the first functional unit.


1    14.    The method of claim 11 wherein the virus is a polymorphic virus.


1    15.    The method 11, wherein the first functional unit is a virus detection unit, and

2    wherein the second functional unit is a fetch and decode unit.


1    16.    The method of claim 11, further comprising:

2    after determining the instruction is associated with a virus, removing the instruction

3    from the processor pipeline.


1    17. The method of claim 11, wherein the instruction has been partially processed by

2    a set of one or more functional units of the processor pipeline.


1    18.    A processor comprising:

2            an instruction cache to store instructions;

3            a virus detection unit to receive the instructions from the instruction cache,

4                    the virus detection unit to transmit ones of the instructions that are

5                    not associated with a virus, the virus detection unit including,

6                    a virus information unit to store virus signatures and state machine

7                        information;

8                    an authentication unit to authenticate the source of the virus

9                        signatures and the state machine information; and

10                    a virus detection engine to compare certain of the instructions to the

11                        virus signatures, and to input certain of the instructions into a

12                        state machine configured according to the state machine

13                        information;

14              a fetch and decode unit to receive ones of the instructions from the virus

15                   detection unit; and

16    a set of one or more execution units to receive ones of the instructions from the

17    fetch and decode unit and to execute the ones of the instructions.


1    19.    The processor of claim 18, wherein the virus detection engine determines

2    whether ones of the instructions are associated with the virus.


1    20.    The processor of claim 18, wherein the virus is a polymorphic virus.


1    21.    A system comprising:

2            a synchronous dynamic random access memory (SDRAM) unit;

3            a processor coupled to the SDRAM unit, the processor including,

4    a plurality of functional units including a first functional unit and a second

5    functional unit, the first functional unit to receive instructions, to determine whether

6    ones of the instructions are associated with a virus, and to transmit the ones of the

7    instructions not associated with the virus to the second functional unit.


1    22.    The system of claim 21, wherein the first functional unit is a virus detection

2    unit, and wherein the second functional unit is a fetch and decode unit.


1    23.    The system of claim 21, wherein the first functional unit is a virus detection

2    unit and wherein the second functional unit is a dispatch and execution unit.


1    24.    The system of claim 21, wherein the first functional unit includes,

2            a virus information unit to store virus information; and

3    a virus detection engine to compare each of the instructions to the virus information

4    stored in the processor.

1    25.    The system of claim 21, wherein the virus detection unit includes an

2    authentication unit to authenticate a source of the virus information.


1    26.    The system of claim 21, wherein the first functional unit includes a virus

2    information unit, the virus information unit to store a state machine for determining

3    whether ones of the instructions are associated with a virus.